REMARKS

In the Office Action, the Examiner rejected the claims under 35 USC §103. The claims have been amended to correct various typographical errors. New claims 40-41 have been added. Claims 1-41 are now pending. The rejections are fully traversed below.

Reconsideration of the application is respectfully requested based on the following remarks.

REJECTION OF CLAIMS UNDER 35 USC §103

In the Office Action, the Examiner rejected claims 1-6, 22-24, 26-27, 32-35, 37 and 39 under 35 USC §103 as being unpatentable over Cloonan Patent No. 2002/0066110 A1, ('Cloonan' hereinafter) in view of Beser, Patent No. 6,331,987, ('Beser' hereinafter).

Polling is used to establish communication between a CMTS and a cable modem. Each of the pending claims enables cable modems to be prioritized for purposes of polling the cable modems. The cable modems are then polled in an order indicated by the prioritized cable modems.

Cloonan discloses a cable modem termination system (CMTS), which reduces the time required to switch over traffic from a failed circuit to a back up circuit. FIG. 1 shows a single CMTS. As shown and described with reference to FIG. 2, the CMTS includes a number of cable interface cards. If a fault is discovered on one of the active cable interface cards, then the protection switch can re-route the traffic using the spare cable interface card. See paragraph [0028]. Specifically, fault recovery time to switch over to a spare circuit is reduced by copying the operational parameters used in each of the active circuits into a spare circuit such that upon

the failure of an active circuit, the spare circuit needs only to be instructed which set of operational parameters for a particular failed circuit to use. See Abstract.

Cloonan discloses a single CMTS. As set forth above, Cloonan relates to the failure of a circuit within a CMTS and the copying of parameters from an active circuit into a spare circuit. Even if the Cloonan is interpreted to include a backup CMTS (e.g., spare circuit) and an active CMTS (e.g., active circuit), there is no indication that the parameters that are copied include subscriber information. More particularly, with respect to claim 1, Cloonan neither discloses nor suggests receiving by a backup cable modem termination system subscriber information associated with one or more cable modems from an active cable modem termination system.

In the Examiner's response to Applicant's arguments, the Examiner cites page 1, paragraphs 8-11, asserting that Cloonan does teach "receiving by the backup cable modem termination system subscriber information associated with the one or more cable modems from the active cable modem termination system, the subscriber information including one or more subscriber identifiers." Applicant respectfully traverses this assertion. While paragraphs 8-11 of Cloonan do discuss Quality of Service (QoS) and service level agreements (SLAs), these paragraphs fail to disclose or suggest transmitting subscriber information from an active cable modem termination system to a backup cable modem termination system. In fact, paragraphs 8-11 of Cloonan say nothing about active and backup cable modem termination systems.

Paragraphs 8-11 disclose that various data packets may be treated differently. While it is well known that data packets may be prioritized differently, there is nothing in Cloonan to suggest polling cable modems in a particular order in order to establish communication with cable modems in a particular order. Stated another way, Cloonan is not concerned with the order in which communication between one or more cable modems and a backup cable modem termination system is established. Accordingly, Applicant respectfully asserts that Cloonan fails to disclose or suggest "polling the one or more cable modems by the backup cable modem

termination system in the order indicated by the prioritized cable modems such that communication between the one or more cable modems and the backup cable modem termination system is established in the order indicated by the prioritized cable modems."

Moreover, while the Examiner cites paragraphs 14 and 32, these portions of Cloonan fail to disclose or suggest prioritizing cable modems in any manner. However, Applicant was unable to find any reference in the cited paragraphs to prioritizing cable modems.

Paragraph 14 discusses the "re-ranging" and "re-registration" process, but clearly discloses that the problems present in the prior art "will require novel techniques that eliminate the re-ranging and re-registration of the cable modems." Thus, Cloonan teaches away from performing "re-ranging," and therefore teaches away from polling the cable modems by a backup CMTS in the manner claimed (e.g., polling the cable modems by a backup CMTS in a prioritized fashion).

Paragraph 32 of Cloonon indicates that "the spare cable interface card that is being switched into the path of the signals should produce a consistent flow of signals to the downstream cable modems that are identical to, or at least very similar to the flow of signals that were being produced by the faulty interface card, just prior to its failure..." "As a result, the cable modems perceive no interruption of signal flow." Thus, paragraph 32 makes it unnecessary for "re-ranging" to be performed. Accordingly, Applicant respectfully asserts that Cloonan teaches away from performing polling of the cable modems in accordance with the claimed invention.

Applicant respectfully submits that Cloonan fails to disclose or suggest prioritizing by a backup cable modem termination system the cable modems using at least one of the subscriber information or a time of receipt of the subscriber information, the prioritized cable modems indicating an order in which the transmission of messages between the one or more cable

modems and the backup cable modem termination system is to be restored. Applicant also respectfully submits Cloonan also fails to disclose the polling of cable modems in any manner. It follows that Cloonan fails to disclose or suggest a backup cable modem termination system polling the cable modems in the order indicated by the prioritized cable modems, thereby enabling the transmission of messages between the one or more cable modems and the backup cable modem termination system to be restored.

The Examiner admits that Cloonan fails to teach "wherein receiving, prioritizing and polling by the backup cable modem termination system." The Examiner seeks to cure the deficiencies of Cloonan with Beser.

The Examiner cites Figure 8-9; col. 14, lines 20-45, and col. 16, lines 35-45 of Beser. FIG. 1 of Beser shows a single CMTS 12. While col. 16, lines 35-45 of Beser discloses that the head-end may include multiple CMTSs 12, nothing in Beser discloses or suggests that one of these CMTSs 12 functions as a backup CMTS. Rather, Beser discloses that the server 36 can help allocate tasks between the multiple CMTSs 12. In other words, the multiple CMTSs 12 are described in Beser as being active. Thus, Beser fails to disclose an active CMTS and a backup CMTS. In other words, Beser fails to disclose a backup CMTS in any manner. Accordingly, Beser fails to disclose or suggest a backup cable modem termination system performing the claimed steps.

Beser discloses a first network device (e.g., cable modem termination system) that forwards data received from a second network device on multiple channels (e.g., cable modem). See col. 3, lines 35-51. As shown and described with reference to Figures 8-9, the first network device receives a request from the second network device to establish a connection between the second network device and a third network device with a specific quality of service and a channel-identification parameter. The first network device may forward data packets on a channel corresponding to the channel-identification parameter to the third network device.

Nothing in Beser discloses or suggests that the third network device is a CMTS. Thus, it is unclear what element the Examiner is interpreting to be a backup CMTS.

A server 36 may be delegated the task of tracking and allocating system resources. Specifically, the server may determine whether the CMTS 12 has enough available bandwidth to provide a QoS request to a cable modem. See col. 14, lines 20-45. Where the head-end includes multiple CMTSs 12, the server may allocate tasks between the CMTSs 12. See col. 16, lines 35-45. Beser fails to disclose or suggest the function of one of the CMTSs 12 operates as a backup CMTS.

Beser fails to disclose or suggest prioritizing cable modems and polling the prioritized cable modems. In fact, Beser relates to the bundling of data (see title) and discusses the forwarding of data packets by a CMTS, but does not discuss polling of cable modems by a CMTS in any manner. Moreover, as set forth above, Beser fails to disclose or suggest the use of a backup CMTS. It follows that Beser fails to disclose or suggest a backup CMTS performing the claimed steps of prioritizing and polling. Thus, Beser fails to cure the deficiencies of Cloonan. In view of the deficiencies of the primary references as set forth above, Applicant respectfully asserts that the combination of the cited references would fail to operate as claimed. It is important to note that the claimed invention provides numerous advantages over the cited art. More specifically, the Background section of Applicant's specification addresses the problems associated with time outs when a CMTS fails, particularly when real-time traffic such as voice or video data is being transmitted. The cited art, separately or in combination, fails to disclose or suggest this problem. Similarly, the cited art, separately or in combination fails to disclose or suggest a solution to this problem (e.g., by prioritizing the cable modems and polling the cable modems in the prioritized order).

Neither of the cited references, separately or in combination, discloses or suggests communication between an active CMTS and a backup CMTS in the manner claimed.

Moreover, neither of the cited references, separately or in combination, discloses or suggests prioritizing cable modems by a backup CMTS and polling the prioritized cable modems by a backup CMTS in the prioritized order such that communication between the one or more cable modems and the backup cable modem termination system is established in the order indicated by the prioritized cable modems. In view of the above, the combination of the cited references would fail to operate as claimed. Even if the references were combined, this would merely result in the prioritization of data traffic by a backup CMTS. The combination of the cited references would not change the order in which communication between various cable modems and a backup cable modem termination system is established. As a result, the effects of timeouts as a result of a failed CMTS would not be reduced, as achieved by the claimed invention. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of the claims under 35 USC 103.

In the Office Action, the Examiner rejected claim 41 under 35 USC §103 as being unpatentable over Cloonan in view of Beser, and further in view of Mannette, U.S. Patent No. 6,816,500 ('Mannette' hereinafter) This rejection is fully traversed below.

The Examiner cites col. 2, lines 33-68 and col. 3, lines 23-col. 4, lines 46. However, it is important to note that col. 2, lines 33-68 merely set forth different types of data traffic such as voice, video, etc.

Applicant respectfully asserts that Mannette fails to cure the deficiencies of the primary references, as discussed above. Accordingly, Applicant respectfully asserts that the combination of the cited references would fail to operate as claimed. Applicant therefore respectfully asserts that claim 41 is patentable over the cited references.

In the Office Action, the Examiner rejected claim 38 under 35 USC §103 as being unpatentable over Cloonan in view of Beser and further in view of Sherer, U.S. Patent No. 6,434,165, ('Sherer' hereinafter). This rejection is fully traversed below.

Applicant respectfully submits that Sherer fails to cure the deficiencies of the primary references, as discussed above. Accordingly, Applicant respectfully asserts that claim 38 is patetable over the cited references.

In the Office Action, the Examiner rejected claims 7-21, 25, 28-29, and 36 under 35 USC §103 as being unpatentable over Cloonan in view of Beser and further in view of Gummalla, U.S. Patent Number 6,999,414 B2, ('Gummalla' hereinafter) This rejection is fully traversed below.

Applicant respectfully submits that Gummalla fails to cure the deficiencies of the primary references. It is also important to note that Gummalla relates to the combining of requests for data bandwidth by a data provider for transmission of data. See title. The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cloonan in view of Gummalla to increase the efficiency of providing requested bandwidth data. The Examiner further asserts that "one would be motivated to do so to distribution data from the CMTS to the cable modem." However, it is important to note that the claimed invention does not directly relate to the distribution of data from a CMTS to a cable modem, but rather the establishing of communication between a backup CMTS and one or more cable modems. Thus, even if the references were combined, they would fail to achieve the desired result, which is to restore communication between a backup CMTS and one or more cable modems upon failure of an active CMTS. More specifically, in accordance with the pending claims, communication between the backup CMTS and each of the cable modems is

restored in a particular order based upon the manner in which the cable modems are prioritized. The cited references, separately or in combination, fail to disclose or suggest that a backup CMTS poll cable modems in a particular order. Accordingly, Applicant respectfully submits that claims 7-21, 25, and 28-29 are patentable over the cited references.

The Examiner rejected claims 30-31 under 35 USC §103 as being unpatentable over Cloonan in view of Beser and further in view of Burroughs, U.S. Pub. No. 2002/0144284 A1, ('Burroughs' hereinafter). This rejection is fully traversed below.

The Examiner seeks to cure the deficiencies of Cloonan and Beser with Burroughs. However, Applicant respectfully asserts that Burroughs fails to cure the deficiencies of the primary references.

It is important to note that Burroughs requires that the cable modem provide parameters to the CMTS. See page 5, paragraph 48. More particularly, Burroughs discloses the transmission of a registration request message from a cable modem to the CMTS. See page 4, paragraph 37. This process is performed when the cable modem determines that the primary downstream channel is not valid. See page 3, paragraph 32. As a result, the intelligence (e.g., switching to a downstream channel) is implemented in the cable modem rather than the CMTS. Burroughs fails to disclose or suggest communication between two different CMTSs.

Moreover, Burroughs requires that the cable modems actively switch to a backup CMTS, as well as provide parameters to their backup CMTS. As a result, Burroughs teaches away from communicating between a backup CMTS and an active CMTS. Moreover, since the cable modems actively initiate communication with their backup CMTS, it would be unnecessary for the backup CMTS to prioritize the order in which communication with the cable modems should be established. Similarly, it would be unnecessary for the backup CMTS to poll the cable

modems to establish communication. As such, Applicant respectfully submits that Burroughs teaches away from the claimed invention. Accordingly, Applicant respectfully submits that claims 30-31 are patentable over the cited references.

SUMMARY

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Amendment is to be charged to Deposit Account No. 504480 (Order No. CISCP251).

Respectfully submitted,

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